

REMARKS

In this paper, claims 1, 20 and 22 are currently amended. After entry of the above amendment, claims 1-38 are pending.

The applicant appreciates the allowance of claims 10-12 and 31-33.

Claims 8, 9, 29 and 30 were rejected under 35 U.S.C. §112 as being indefinite. The specification has been amended to provide the standard definition of “simultaneous” as set forth in *IEEE 100, The Authoritative Dictionary of IEEE Standards Terms*. Two signals need not start and stop at the same time in order to be simultaneous. It is only necessary that two signals occur at the same instant of time.

Claims 1-7, 13, 18, 20-28 and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ethington (US 5,681,234) in view of Browning (US 5,261,858). This basis for rejection is respectfully traversed.

Independent claims 1, 20 and 22 have been amended to clarify that, when the transmission control unit receives at least one shift command requesting a shift through N speed stages to a requested destination speed stage, where N is an integer greater than one, the transmission control unit generates information for causing the first transmission and the second transmission in combination to move a total of M times to move to a different destination speed stage, where M is an integer less than N, without regard to whether or not the first transmission and the second transmission would be temporarily set in a speed stage outside a range between the origin speed stage and the requested destination speed stage when moving from the origin speed stage to the requested destination speed stage.

Ethington discloses an automatic bicycle transmission wherein sprocket combinations representing successively increasing gear ratios may be stored in a table, and wherein a control unit operates front and rear bicycle derailleurs to sequentially upshift from the lowest to the highest gear ratio and sequentially downshift from the highest to the lowest gear ratio. The office action properly notes that Ethington does not disclose the feature or generating information for causing the first

transmission and the second transmission in combination to move a total of M times to reach the destination speed stage, where M is an integer less than N.

Browning likewise discloses an automatic bicycle transmission wherein front and rear derailleurs are operated to produce a desired gear ratio. As long as the requested gear ratio is legal (otherwise, the change request usually is not executed), the system will move the front and rear derailleurs to the sprocket combination that produces the desired gear ratio. Sometimes, if the requested gear is illegal, the system will move the front and rear derailleurs to a sprocket combination that produces a gear ratio that is closer to the requested gear than the current gear. However, since such movement is dependent on the existence of an illegal gear request, Browning actually teaches away from the presently claimed subject matter.

Claims 14-16 and 35-37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ethington in view of Browning and Colbert, et al (US 5,213,548). This basis for rejection is respectfully traversed for the same reasons noted above. Furthermore, there is no evidence or suggestion that Colbert's sensor would increase efficiency of a system such as that disclosed in either Ethington or Browning.

Claims 17, 19 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ethington in view of Browning and Spencer, et al (US 6,047,230). This basis for rejection is respectfully traversed for the same reasons noted above. Furthermore, there is no evidence or suggestion that Spencer, et al's cadence sensor would increase efficiency and safety of a system such as that disclosed in either Ethington or Browning.

Accordingly, it is believed that the rejections under 35 U.S.C. §103 have been overcome by the foregoing amendment and remarks, and it is submitted that the claims are in condition for allowance. Reconsideration of this application as amended is respectfully requested. Allowance of all claims is earnestly solicited.

TADASHI ICHIDA  
Application No.: 10/001,324  
Page 17

PATENT

Respectfully submitted,



James A. Deland  
Reg. No. 31,242

DELAND LAW OFFICE  
P.O. Box 69  
Klamath River, California 96050  
(530) 465-2430